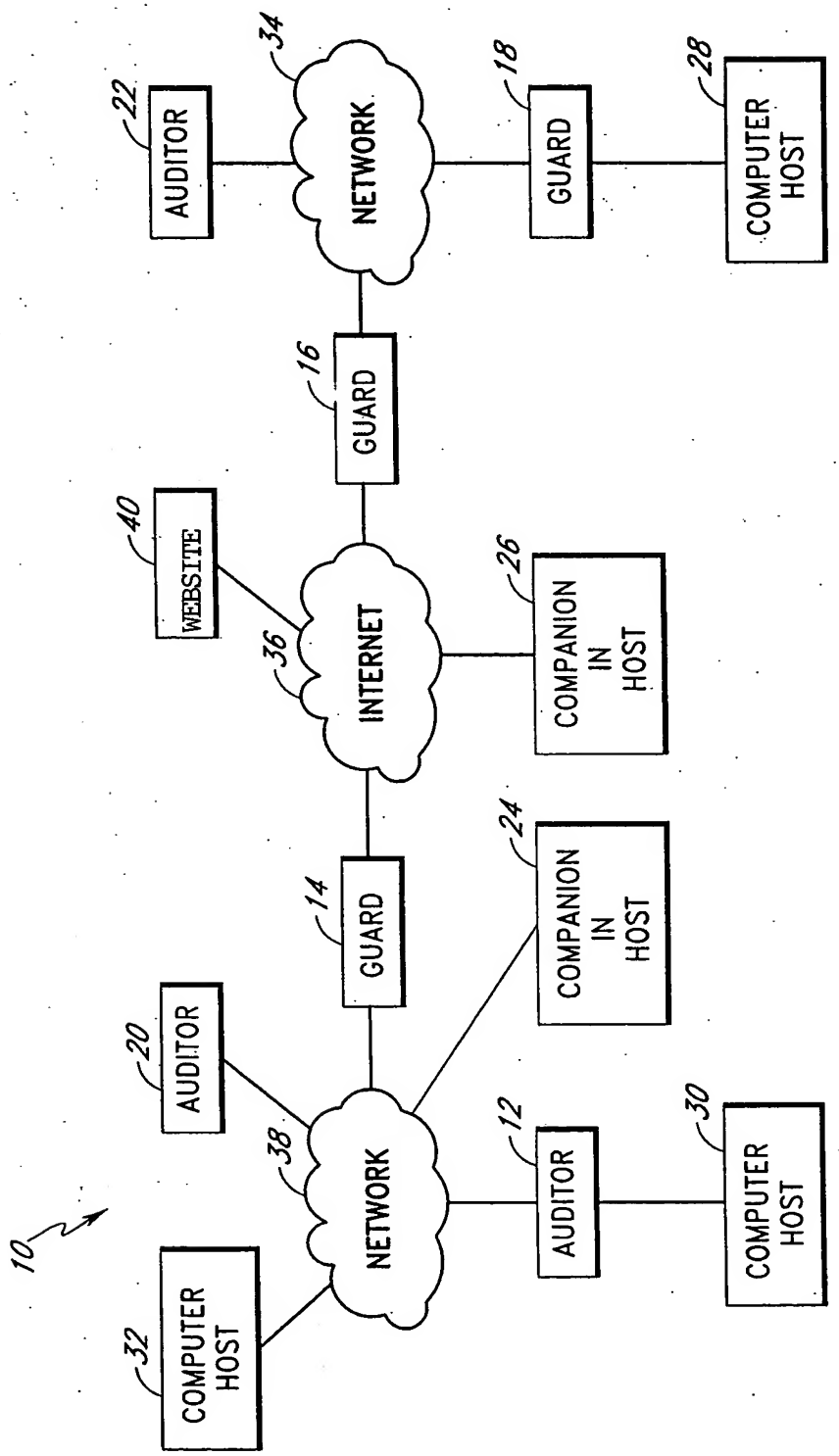
10
AUDITOR
22
NETWORK
34
GUARD
18
COMPUTER HOST
28
GUARD
16
WEBSITE
40
INTERNET
36
COMPANION IN HOST
26
GUARD
14
COMPANION IN HOST
24
AUDITOR
20
NETWORK
38
AUDITOR
12
COMPUTER HOST
30
COMPUTER HOST
32

FIG. 1

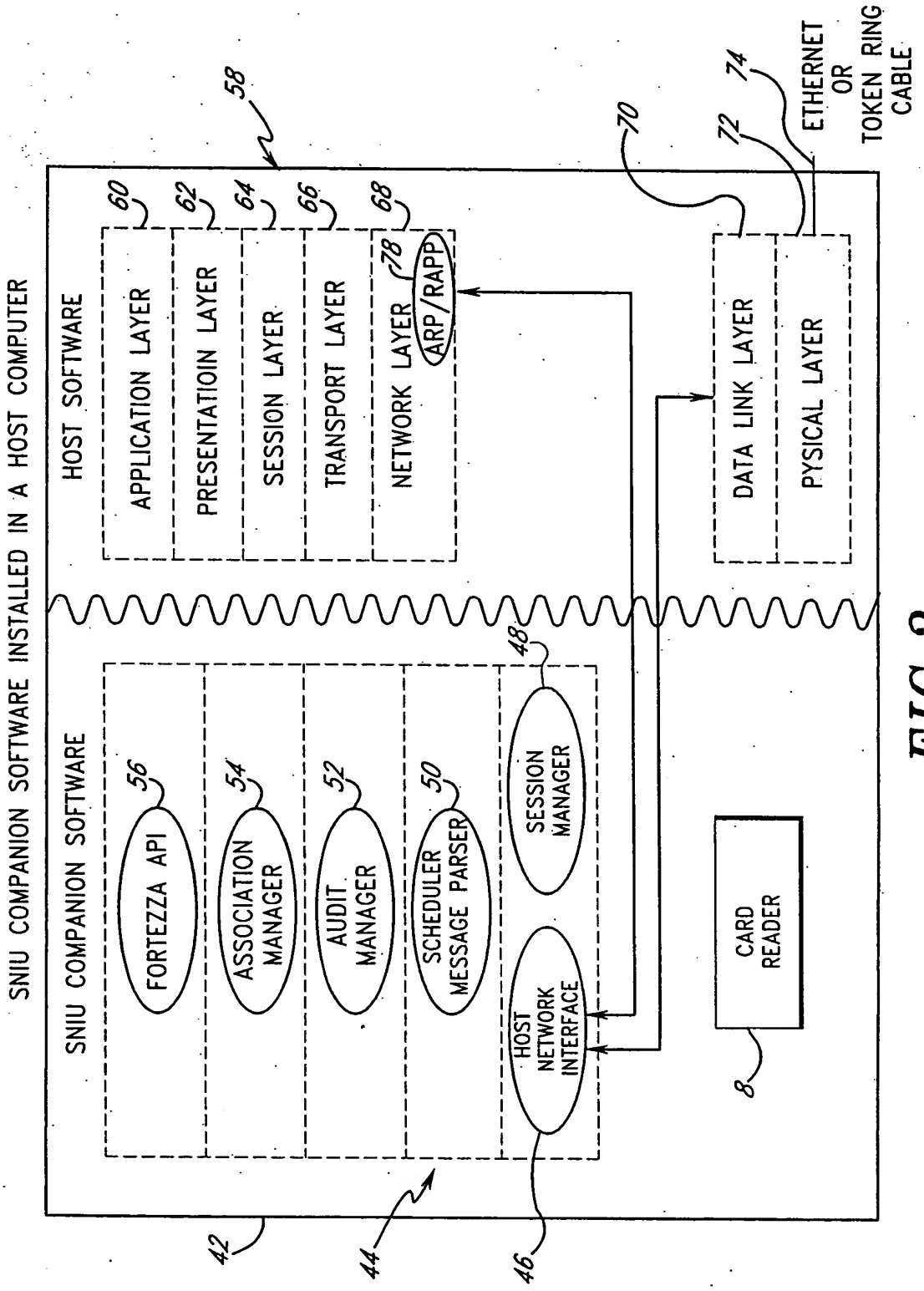
SNIU COMPANION SOFTWARE INSTALLED IN A HOST COMPUTER
HOST SOFTWARE
APPLICATION LAYER
PRESENTATIOIN LAYER
SESSION LAYER
TRANSPORT LAYER
NETWORK LAYER
ARP/RAPP
DATA LINK LAYER
PYSICAL LAYER
ETHERNET OR TOKEN RING CABLE
SNIU COMPANION SOFTWARE
FORTEZZA API
ASSOCIATION MANAGER
AUDIT MANAGER
SCHEDULER MESSAGE PARSER
SESSION MANAGER
HOST NETWORK INTERFACE
CARD READER
58
60
62
64
66
68
78
70
72
74
56
54
52
50
48
42
44
46
8

FIG. 2

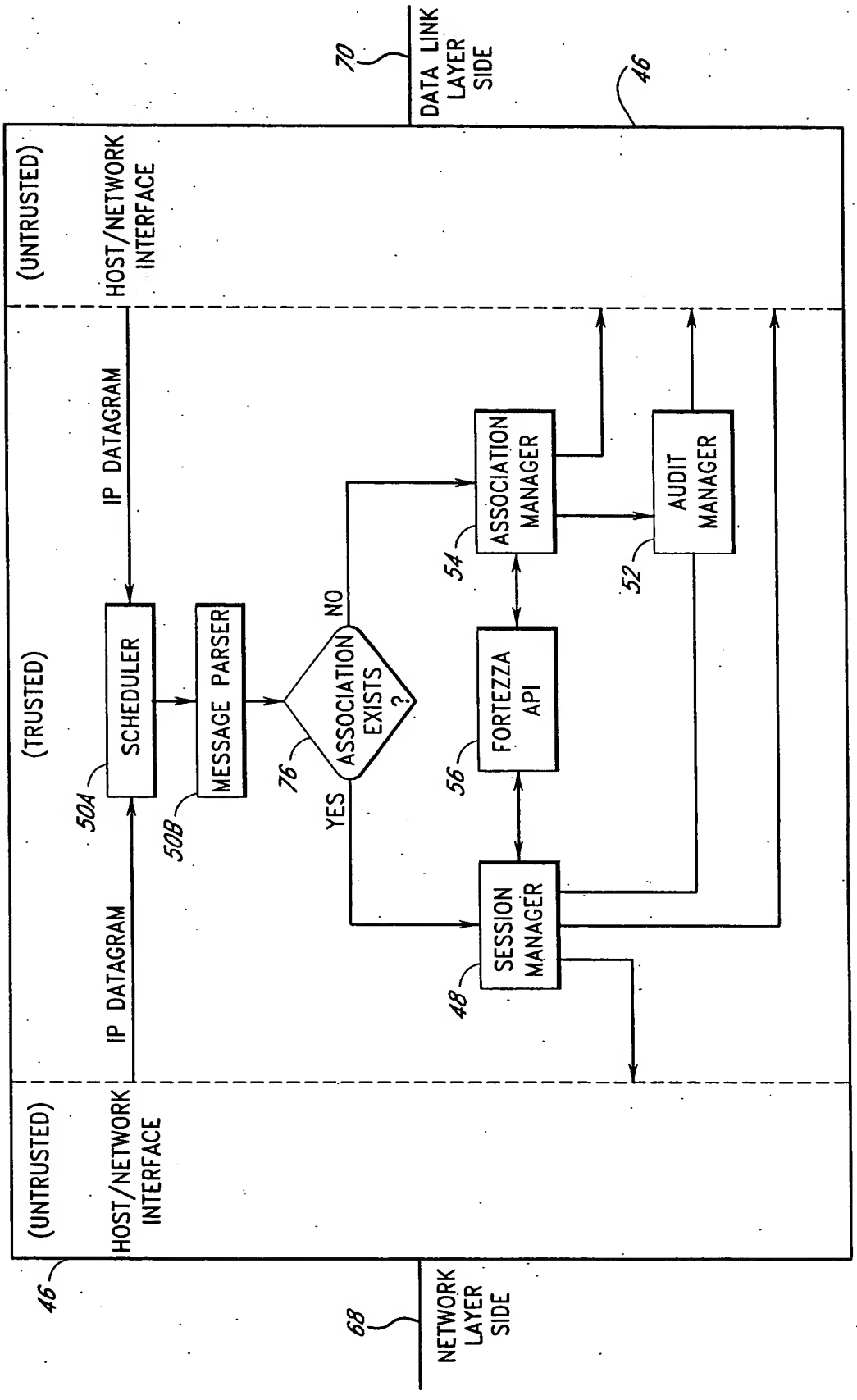
70
DATA LINK LAYER SIDE
46
(UNTRUSTED)
HOST/NETWORK INTERFACE
IP DATAGRAM
(TRUSTED)
SCHEDULER
504
MESSAGE PARSER
508
ASSOCIATION EXISTS ?
76
NO
YES
ASSOCIATION MANAGER
54
AUDIT MANAGER
52
FORTEZZA API
56
SESSION MANAGER
48
IP DATAGRAM
(UNTRUSTED)
HOST/NETWORK INTERFACE
46
68
NETWORK LAYER SIDE

FIG. 3

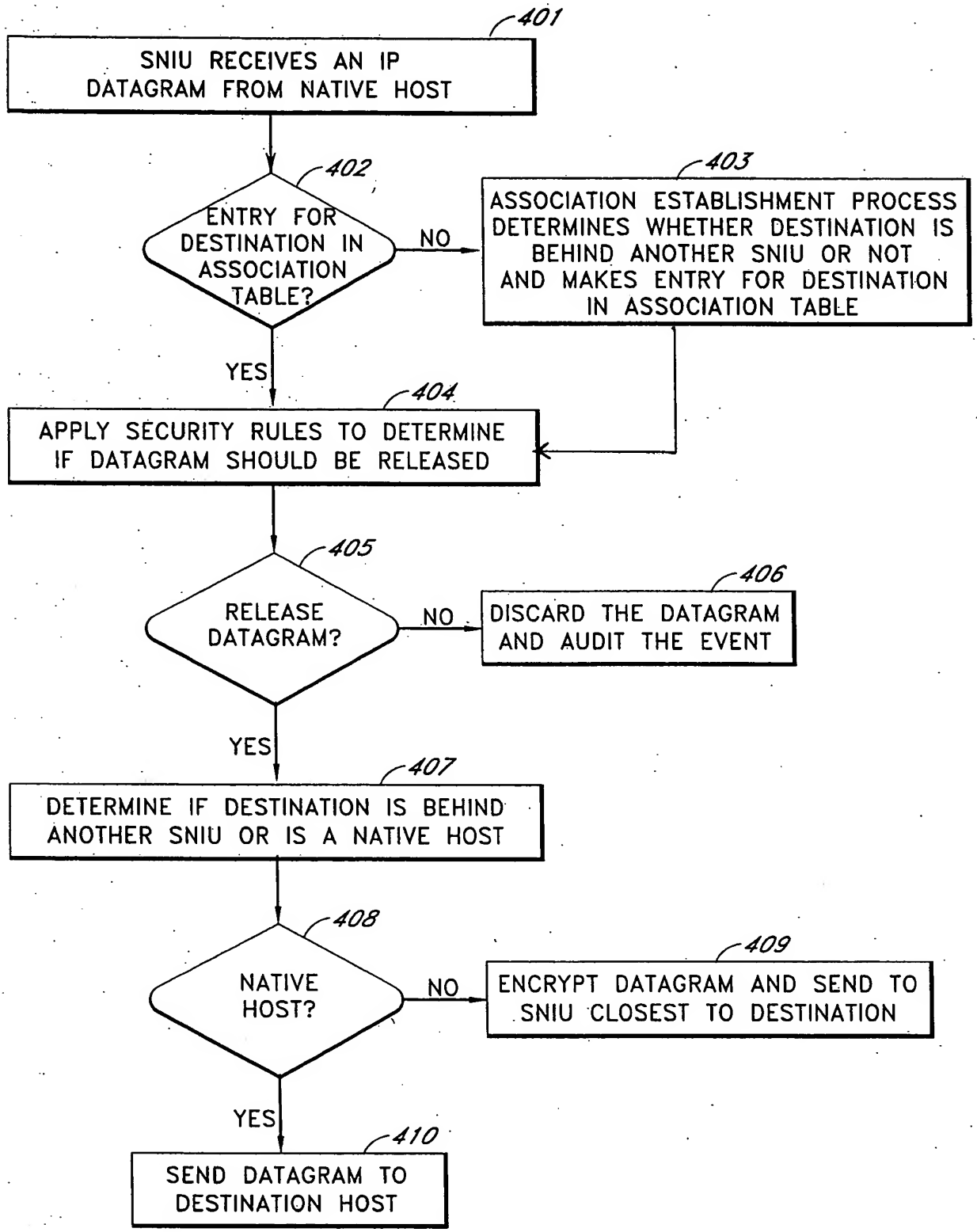
401
SNIU RECEIVES AN IP DATAGRAM FROM NATIVE HOST
402
ENTRY FOR DESTINATION IN ASSOCIATION TABLE?
NO
403
ASSOCIATION ESTABLISHMENT PROCESS DETERMINES WHETHER DESTINATION IS BEHIND ANOTHER SNIU OR NOT AND MAKES ENTRY FOR DESTINATION IN ASSOCIATION TABLE
YES
404
APPLY SECURITY RULES TO DETERMINE IF DATAGRAM SHOULD BE RELEASED
405
RELEASE DATAGRAM?
NO
406
DISCARD THE DATAGRAM AND AUDIT THE EVENT
YES
407
DETERMINE IF DESTINATION IS BEHIND ANOTHER SNIU OR IS A NATIVE HOST
408
NATIVE HOST?
NO
409
ENCRYPT DATAGRAM AND SEND TO SNIU CLOSEST TO DESTINATION
YES
410
SEND DATAGRAM TO DESTINATION HOST

FIG. 4